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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,495	12/23/2003	Dae-Yun Park	0630-1890P	7782

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

O MALLEY, KATHRYN S

ART UNIT PAPER NUMBER

3749

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,495

Applicant(s)

PARK ET AL.

Examiner

Kathryn S. O'Malley

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/23/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/15/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-7, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,738,034 to Maramatsu et al.
3. Maramatsu et al. teaches a method for detecting the residual drying time of a clothes dryer comprising detecting the moisture contained in the clothes with a pair of electrodes 21, wherein the moisture value is in inverse proportion to the resistance value of the electrodes 21, and displaying a residual drying time based on the moisture value on display unit 26 that decreases with the passage of time. The method further includes displaying a preset early residual drying time and determining the residual drying time from a pre-set table according to the detected moisture level. Note column 10, lines 1-57 and Figure 6.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 8, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maramatsu et al. as applied to claim 1 above, and further in view of US Patent 4,531,305 to Nagayasu et al.

6. Maramatsu et al. further teaches a cool-down subroutine in which the cool-down time is determined according to a preset look-up table. Note column 13, lines 49-59. Maramatsu et al. further teaches that it is well known in the art to determine residual drying time based on the temperature of the dryer's exhaust gas. Note column 1, lines 20-34. Maramatsu et al. does not teach determining the residual drying time based on a combination of detected moisture levels and exhaust gas temperatures. Nagayasu et al. teaches a similar method for controlling drying time of a clothes dryer comprising determining the moisture level with electrodes as well as determining exhaust gas temperatures. Note column 2, lines 22-30 and column 4, lines 1-37. As Nagayasu et al. teaches that determining drying time based on the combination of the moisture levels and exhaust gas temperatures leads to a more accurate estimation of drying time, it would have been obvious to one of ordinary skill in the art to modify the drying method of Maramatsu et al. with the moisture and temperature combination taught by Nagayasu et al.

Conclusion


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reck et al., Joslin et al., Woerdehoff et al., and Chbat et al. teach similar methods for controlling clothes dryers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathryn S. O'Malley whose telephone number is (571)272-4879. The examiner can normally be reached on M-F (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on (703)308-1935. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KSO


DENISE L. ESQUIVEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700